

REMARKS

Claims 12, 14-24 and 26 are pending in the subject application. By the instant amendment, claim 12 is amended to more particularly claim the subject matter of the present invention. No new matter is added by the amendment to claim 12, as the subject matter thereof is to correct an error of a typographical nature made in a previous amendment.

Claims 12, 14-24 and 26 are submitted to the Examiner for further consideration on the merits. In view of the foregoing amendment and following remarks, reconsideration and withdrawal of the rejections in this application are respectfully requested.

A. Introduction

In the Office Action mailed February 11, 2003, the Examiner rejected claims 12, 14-16, 18-22, 24 and 26 under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 6,166,423 to Gambino et al. ("the Gambino et al. reference") in view of United States Patent No. 5,534,461 to Kuwajima ("the Kuwajima reference"). The Examiner rejected claim 17 under 35 U.S.C. § 103(a) as being unpatentable over the Gambino et al. reference and the Kuwajima reference as applied to claims 12 and 14, and further in view of United States Patent No. 6,074,907 to Oh et al. ("the Oh et al. reference"). The Examiner rejected claim 23 under 35 U.S.C. § 103(a) as being unpatentable over the Gambino et al. reference and the Kuwajima reference as applied to claim 12, and further in view of United States Patent No. 6,066,555 to Nulty et al. ("the Nulty et al. reference").

B. Asserted Rejections Under 35 U.S.C. § 103(a)

In the outstanding Office Action, the Examiner rejected claims 12, 14-16, 18-22, 24 and 26 under 35 U.S.C. § 103(a) as being unpatentable over the Gambino et al. reference in view of the Kuwajima reference.

Applicants respectfully traverse this rejection on the basis that the combination of references suggested by the Examiner does not form the basis for an obviousness rejection under 35 U.S.C. § 103. Specifically, Applicants submit that the Kuwajima reference does not provide any teaching, suggestion or motivation to use a sidewall spacer as in the present invention as claimed. The purpose, function, result and manner of use of the tungsten sidewall spacers of the Kuwajima reference are completely different from that of the present invention.

Although the Kuwajima reference discloses tungsten sidewall spacers *per se*, these tungsten sidewall spacers are left in a trench to improve the step coverage of a wiring layer. The purpose, function, result and manner of use of the tungsten sidewall spacers according to the Kuwajima reference is completely different than the purpose, function, result and manner of use of the sidewall spacers of the present invention that addresses the problem of the possibility of dielectric disconnection. As previously argued in the Amendment filed on December 12, 2002, the Kuwajima reference does not pertain to a capacitor structure, has no electrode in a via hole, and has no dielectric layer formed on an exposed portion of the electrode in the via hole. Therefore, a problem of dielectric disconnection does not exist in the Kuwajima reference. Accordingly, it is not understood how one of skill in the art would interpret and apply a tungsten sidewall spacer left in a trench to improve step coverage of a wiring layer to the completely unrelated problem of the possibility of dielectric disconnection. It is only through hindsight reconstruction that it is possible to draw a connection between the presence of “sidewall spacers” *per se* in the Kuwajima reference and the presence of the “sidewall spacers” in the present invention as claimed. This is supported by the fact that since there is no possibility of incurring dielectric disconnection in the Kuwajima reference, there cannot be said to be any teaching or suggestion in the Kuwajima reference relating to a method of preventing dielectric disconnection.

Therefore, it is not understood how one of ordinary skill in the art would be motivated by the Kuwajima reference to form a sidewall spacer on sidewalls of a via hole and on an exposed portion of a lower electrode to thereby prevent dielectric disconnection in a dielectric layer that is later formed in the via hole. One of ordinary skill in the art would not be motivated by the teaching of the Kuwajima reference to solve a problem of dielectric disconnection - the dielectric disconnection problem is not addressed by the Kuwajima reference because the problem itself is simply nonexistent from the structure taught by the Kuwajima reference.

Therefore, it is respectfully submitted that there is no motivation to combine the teaching of the Kuwajima reference with the teaching of the Gambino et al. reference to prevent dielectric disconnection in a capacitor via hole as disclosed and claimed in the present invention, and that any such combination to reject the claims of the subject application falls within the domain of improper hindsight reconstruction.

Therefore, claim 12 is believed to be patentably distinguished over the cited prior art references and in condition for allowance.

Further, because claims 14-16, 18-22, 24 and 26 depend from claim 12, either directly or indirectly, claims 14-16, 18-22, 24 and 26 are believed to be similarly allowable as depending from an allowable base claim.

Accordingly, reconsideration and withdrawal of the rejection of claims 12, 14-16, 18-22, 24 and 26 are respectfully requested.

C. Rejection of Claim 17 under 35 U.S.C. § 103(a)

In the outstanding Office Action, the Examiner rejected claim 17 under 35 U.S.C. § 103(a) as being unpatentable over the Gambino et al. reference and the Kuwajima reference as applied to claims 12 and 14, and further in view of the Oh et al. reference.

Applicants respectfully traverse this rejection on the basis that the combination of references does not teach or suggest the present invention as claimed in claim 12, from which claim 17 indirectly depends.

It has been shown that there is no motivation to combine the teaching of the Kuwajima reference with the teaching of the Gambino et al. reference and that any such combination to reject the claims of the subject application is improper. It is further submitted that combining the teachings of the Oh et al. reference with the teachings of the Gambino et al. reference and/or the Kuwajima reference does not render claim 17 of the subject application obvious, as the combined teachings do not teach all the limitations of claim 12, from which claim 17 depends.

Therefore, claim 17 is believed to be allowable as depending from an allowable base claim, and a notice to such effect is respectfully requested.

D. Rejection of Claim 23 under 35 U.S.C. § 103(a)

In the outstanding Office Action, the Examiner rejected claim 23 under 35 U.S.C. § 103(a) as being unpatentable over the Gambino et al. reference and the Kuwajima reference as applied to claim 12, and further in view of the Nulty et al. reference.

Applicants respectfully traverse this rejection on the basis that, as discussed above, there is no motivation or basis to combine the teachings of the Gambino et al. reference and the Kuwajima reference to arrive at this rejection other than through impermissible hindsight construction. Further, it is respectfully submitted that combining the teachings of the Nulty et al. reference with the teachings of the Gambino et al. reference and/or the Kuwajima reference does not render claim 23 of the subject application obvious, as the combined teachings do not teach all the limitations of claim 12, from which claim 23 depends.

Therefore, claim 23 is believed to be allowable as depending from an allowable base claim, and a notice to such effect is respectfully requested.

E. Conclusion

Since none of the cited prior art references, either alone or combined, anticipate or render obvious the claims of the subject application, it is respectfully submitted that claims 12, 14-24 and 26 are in condition for allowance, and a notice to such effect is respectfully requested.


Finally, if the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing amendment and remarks, an early and favorable action on all of the pending claims is hereby requested.

Respectfully submitted,

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